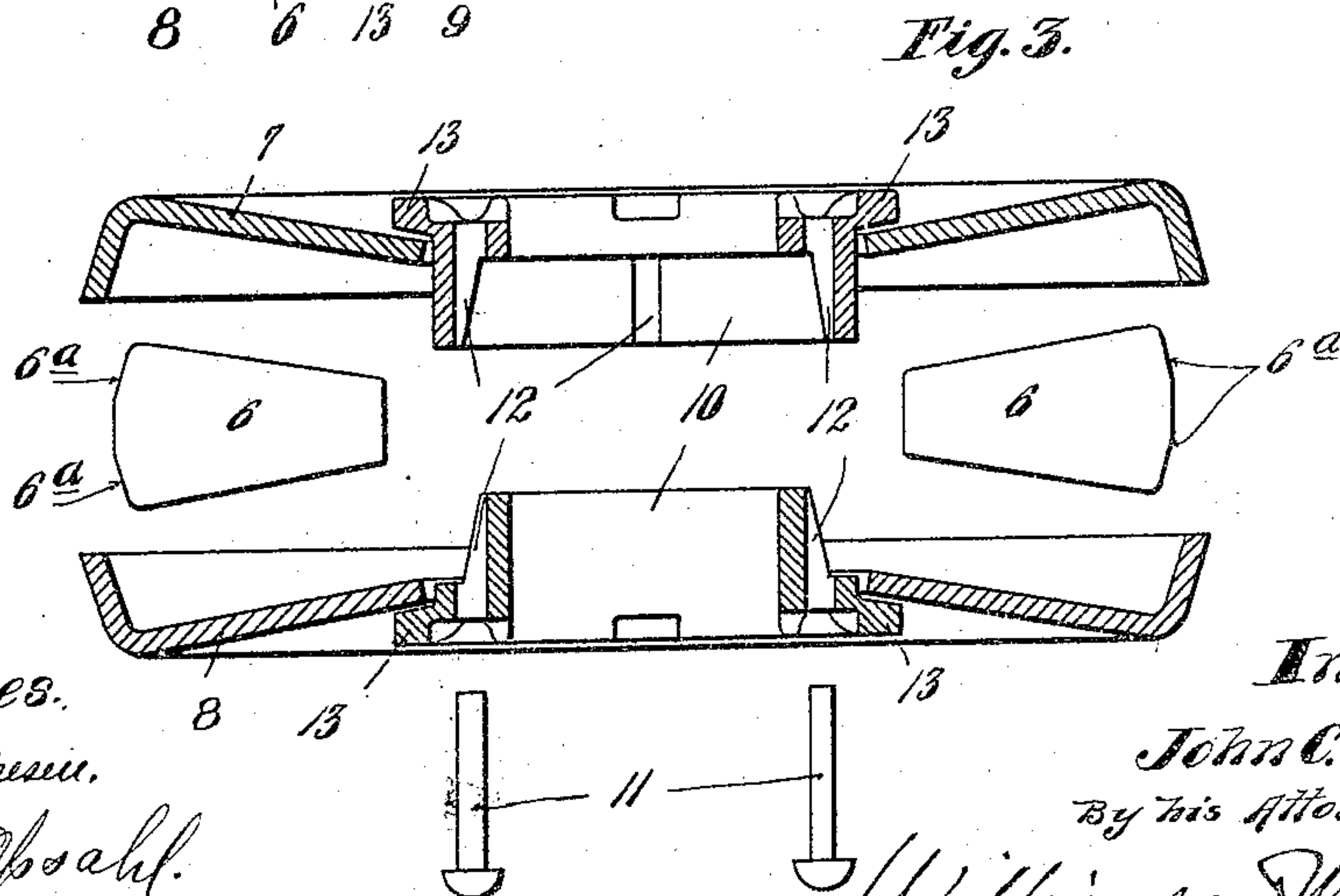
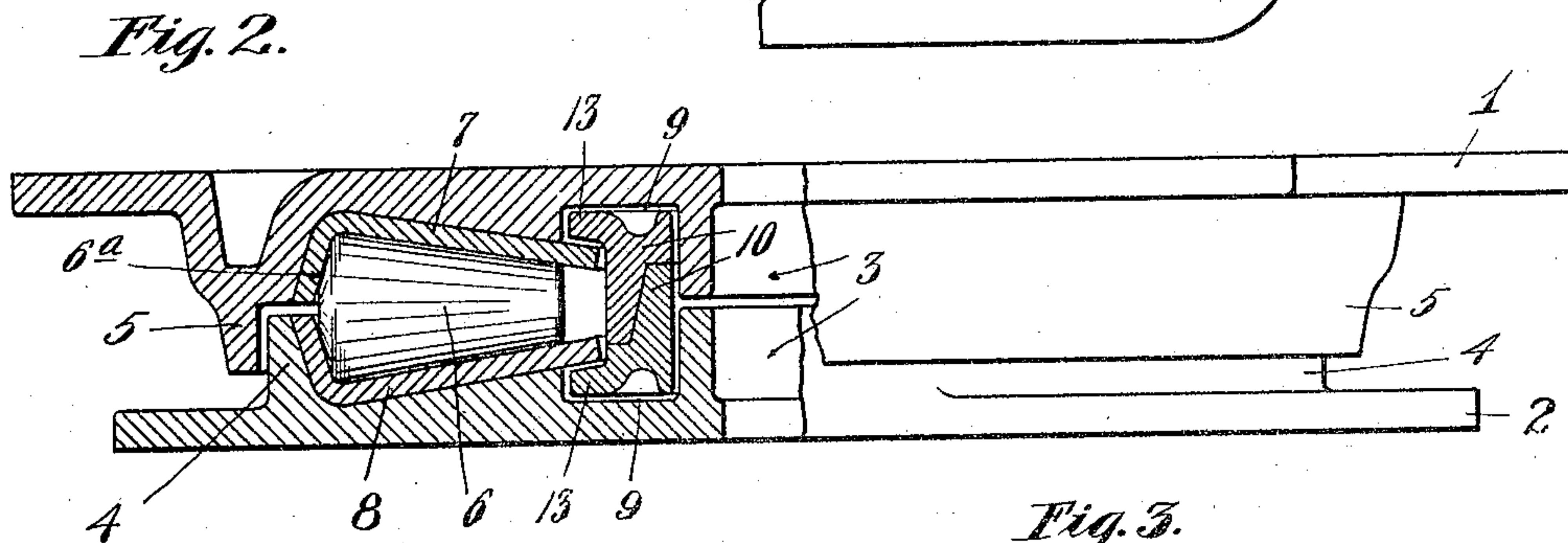
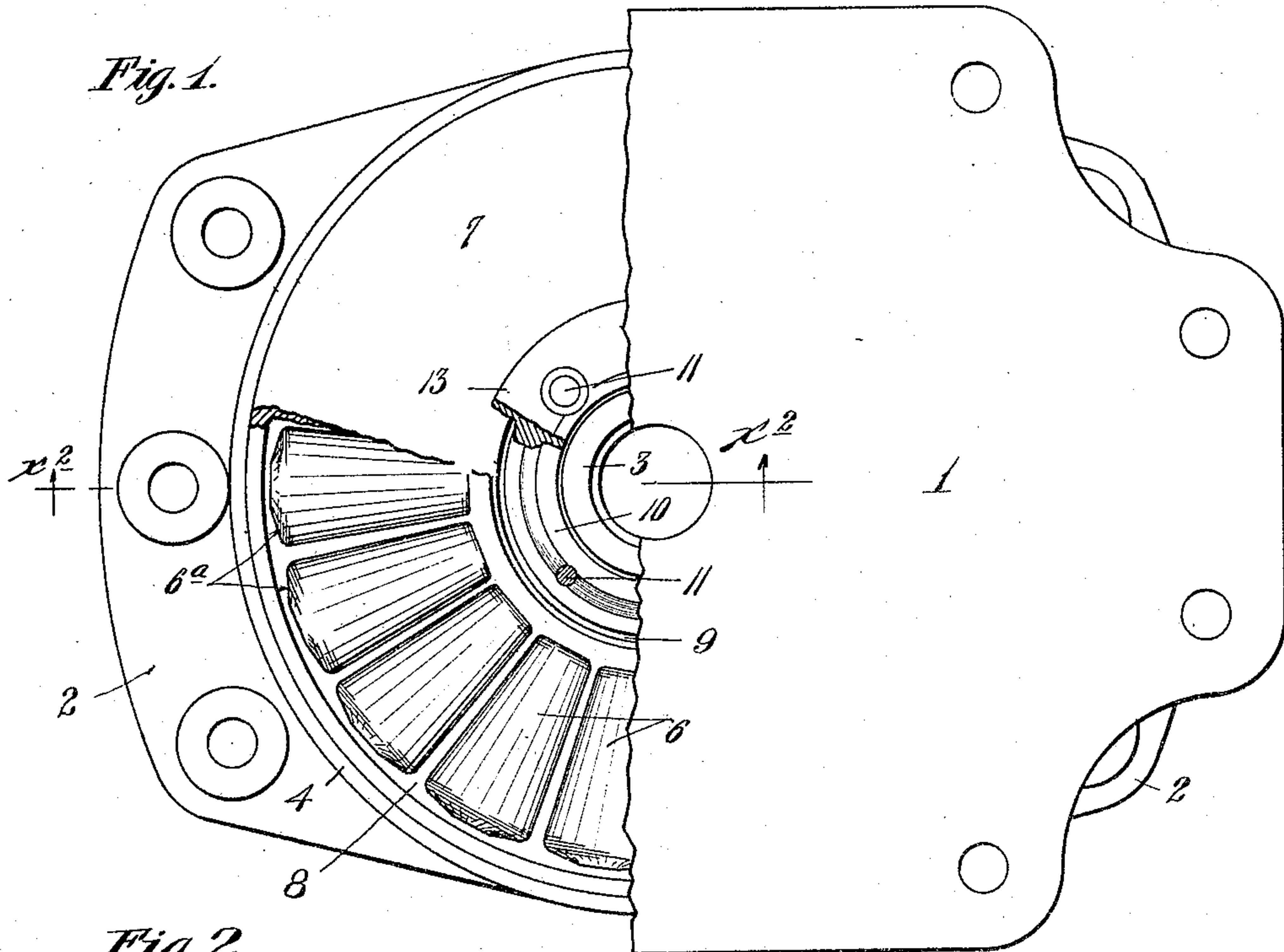


No. 846.893.

PATENTED MAR. 12, 1907.

J. C. BARBER.
ANTIFRICTION CENTER BEARING.
APPLICATION FILED JULY 26, 1906.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN C. BARBER, OF CHICAGO, ILLINOIS.

ANTIFRICTION CENTER-BEARING.

No. 846,893.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed July 26, 1906. Serial No. 327,935.

To all whom it may concern.

Be it known that I, JOHN C. BARBER, 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 Antifricition Center-Bearings; 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.

This invention relates to antifricition center-bearings for railway-cars and the like, and has for its object to improve the same in the several particulars hereinafter noted.

The invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view, chiefly in plan, but with some parts broken away, showing the improved center-bearing. Fig. 2 shows the improved center-bearing partly in side elevation and partly in section on the line $x^2 x^2$ of Fig. 1; and Fig. 3 is a vertical section taken centrally through the roller wearing-plates and retaining-ring, showing the parts separated and showing also a pair of rollers and rivets in full elevation.

The upper member 1 of the center-bearing is adapted to be directly secured to the body-bolster (not shown) of a car, and it is preferably in the form of a steel or malleable casting. The lower bearing member 2 of the center-bearing is also preferably in the form of a steel or malleable casting, and it is adapted to be directly secured to a truck-bolster, (not shown,) or when the center-bearing is incorporated in a lateral-motion center-bearing such as that disclosed in my prior patent, No. 588,810, issued of date August 24, 1897, the said bearing member 2 may constitute the combined lower bearing member of the center-bearing proper and the upper bearing member of the lateral-motion device. At their central portions the bearing members 1 and 2 are formed with vertically-aligned hubs or sleeve portions 3, through which the pivot-bolt (not shown) of the center-bearing is adapted to be passed in the usual way. At its outer portion the lower bearing member 2 is provided with an upwardly-extended annular flange 4, and just

outward of this flange 4 the upper bearing member 1 is provided with a depending annular flange 5, which latter flange surrounds the former. The flange 5 serves as a dust-guard, and it coöperates with the flange 4 to lock the bearing members together by resisting lateral thrusts on said bearing members.

Conical bearing-rollers 6 are interposed between the two bearing-rollers 1 and 2. In accordance with one of the principal features of this invention the rollers 6 are directly interposed between and engaged with upper and lower annular wearing-plates 7 and 8, respectively, which wearing-plates are preferably in the form of pressed steel plates. The body portions of these wearing-plates 7 and 8 are given a conical form corresponding to the taper of the conical rollers 6, and their outer portions are flanged or bent respectively downward and upward for engagement with the large outer ends of the said rollers 6. The said large outer ends of the rollers 6, instead of being rounded, are formed with straight bevels, as indicated at 6^a, and the flanged outer portions of the plates 7 and 8 are bent to correspond to these bevels 6^a. The upper wearing-plate 7 loosely rests in a closely-fitting seat formed in the bottom of the upper bearing member 1, and the lower wearing-plate 8 loosely rests in a closely-fitting seat formed in the top of the lower bearing member 2.

Just outward of their hubs 3 the two bearing members are formed with annular channels 9, into which the inner edges of the two wearing-plates 7 and 8 project. Mounted loosely around the hubs 3 of the two bearing-plates and projecting into the clearance-channels 9 thereof is a two-part retaining-ring 10, the sections of which are, as shown, telescoped together and rigidly secured together by rivets 11, that pass through axially-aligned perforations 12 in the two ring-sections. The sections of the retaining-ring are each provided with an upwardly-projecting annular retaining-flange 13. The retaining-flange 13 of the lower ring-section underlies the inner edge of the lower wearing-plate 8, while the retaining-flange 13 of the upper ring-section overlies the inner edge of the upper wearing-plate 7.

The two wearing-plates 7 and 8 and the retaining-ring 10 constitute a detachable roller-containing device or housing which, together with the rollers, is capable of removal from

the center bearing proper. The retaining-ring 10, as is evident, holds the wearing-plates 7 and 8 against separation when the parts are removed from the center-bearing, and the said wearing-plates, as is also evident, maintain the rollers 6 in proper relative positions. It is important when the center-pin is removed to admit the raising of the car that the rollers be held against displacement. It is also important that the said rollers be kept together and not be permitted to drop out of working positions when the car is derailed and the upper and lower members of the center-bearing become separated. Railways have hitherto met with considerable expense on account of the rollers and antifriction-bearings becoming lost under conditions such as above noted. The importance of the improved device above described is therefore obvious. The detachable wearing-plates may be made of hard and tough steel, such as spring-tempered steel, if desired, regardless of the nature of the metal used to form the bodies of the upper and lower bearing members. Also these detachable wearing-plates may be replaced when worn out without displacement of the body members of the center-bearing. Furthermore, the device described is simple, is of comparatively small cost, and is capable of being very quickly and easily put together and taken apart.

What I claim is—

1. In a center-bearing, the combination with upper and lower bearing members and detachable wearing-plates applied thereto, of a retaining-ring loosely holding said wearing-plates against separation, and antifriction bearing devices, interposed between said wearing-plates and held thereby against displacement, substantially as described.

2. In a center-bearing, the combination with upper and lower bearing members and detachable wearing-plates applied thereto, of a two-part retaining-ring loosely engaging said two plates and holding the same against separation, and conical bearing-rollers interposed between said wearing-plates and held

thereby against displacement, said wearing-plates, retaining-ring and rollers being removable together from between the upper and lower bearing members, substantially as described.

3. In a center-bearing, the combination with upper and lower bearing members and detachable annular wearing-plates applied thereto, of a two-part retaining-ring loosely engaging the inner edges of said annular wearing-plates and holding the same against separation, said wearing-plates having retaining-flanges at their outer portions, and conical bearing-rollers interposed between said wearing-plates and held thereby against displacement, substantially as described.

4. In a center-bearing, the combination with upper and lower bearing members, of annular wearing-plates detachably applied thereto and having reversely-extended annular stop-flanges at their outer portions, and conical bearing-rollers interposed between said annular wearing-plates with their outer ends arranged, to thrust against the stop-flanges of said wearing-plates, substantially as described.

5. In a center-bearing, the combination with upper and lower bearing members 1 and 2 respectively, provided with aligned hubs 3 and clearance-channels 9, the said lower member 2 having the annular flange 4, and said bearing member 1 having the annular flange 5 surrounding said flange 4, of the annular wearing-plates 7 and 8 fitting seats formed respectively in the said members 1 and 2, the bearing-rollers 6 interposed between said wearing-plates, and the two-part retaining-ring 10 working within the clearance-channels 9 and engaging the inner edges of said annular wearing-plates 7 and 8 and holding the same against separation, substantially as described.

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

JOHN C. BARBER.

Witnesses:

E. W. WEBB,
LEE W. BARBER.