

No. 837,167.

PATENTED NOV. 27, 1906.

O. WILLIAMS.

CAR AXLE.

APPLICATION FILED MAR. 27, 1906.

Fig. 1

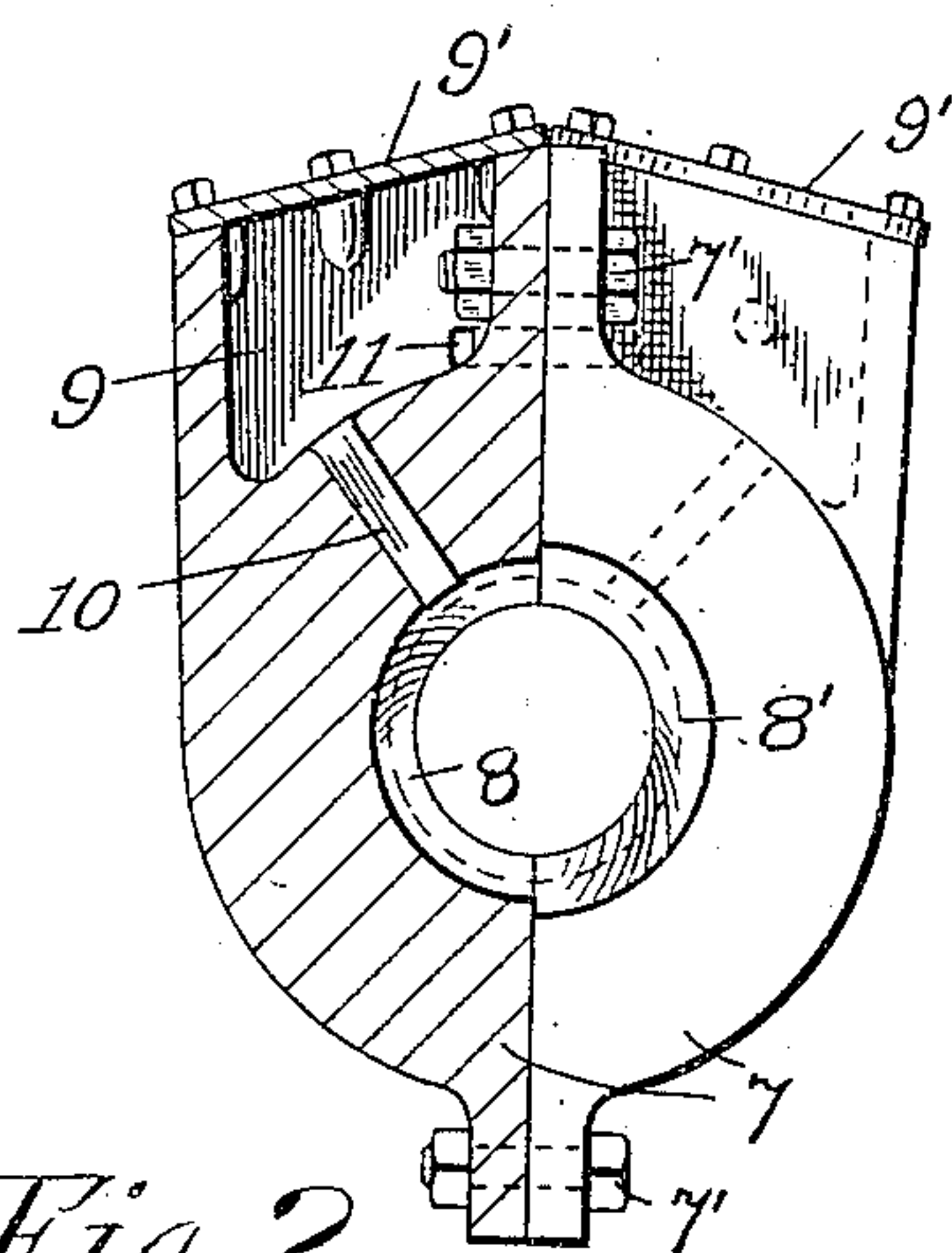
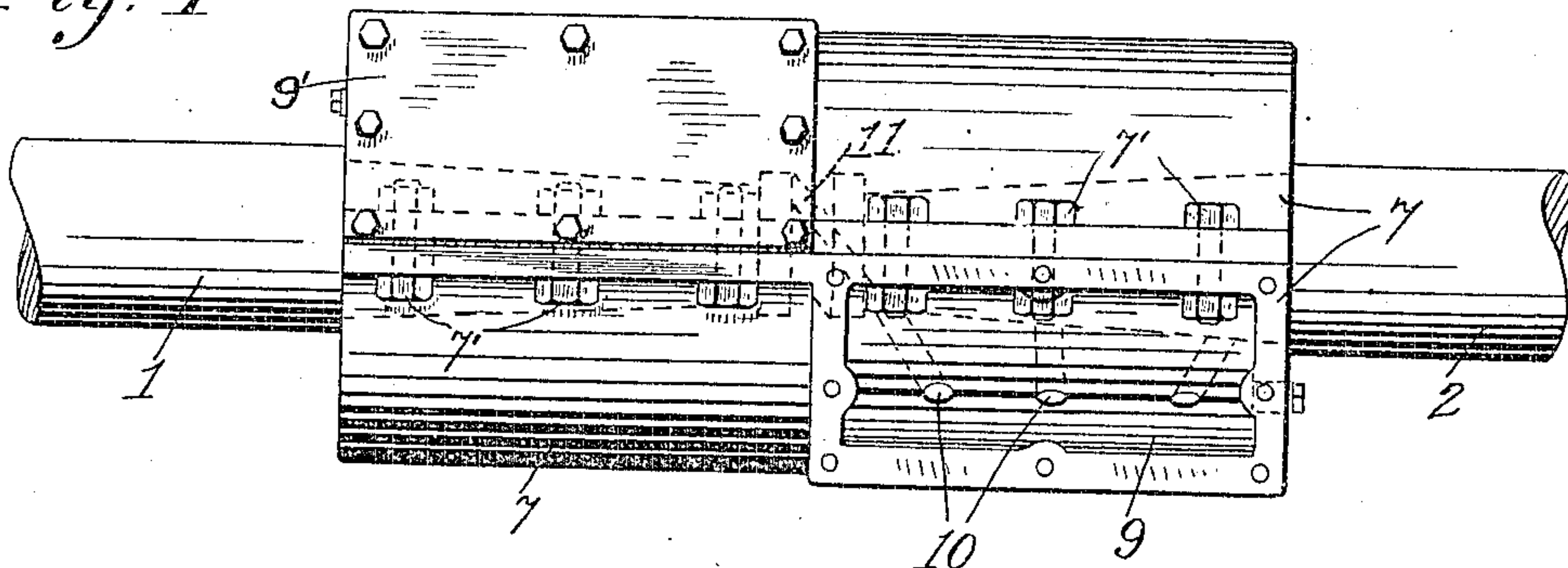


Fig. 2

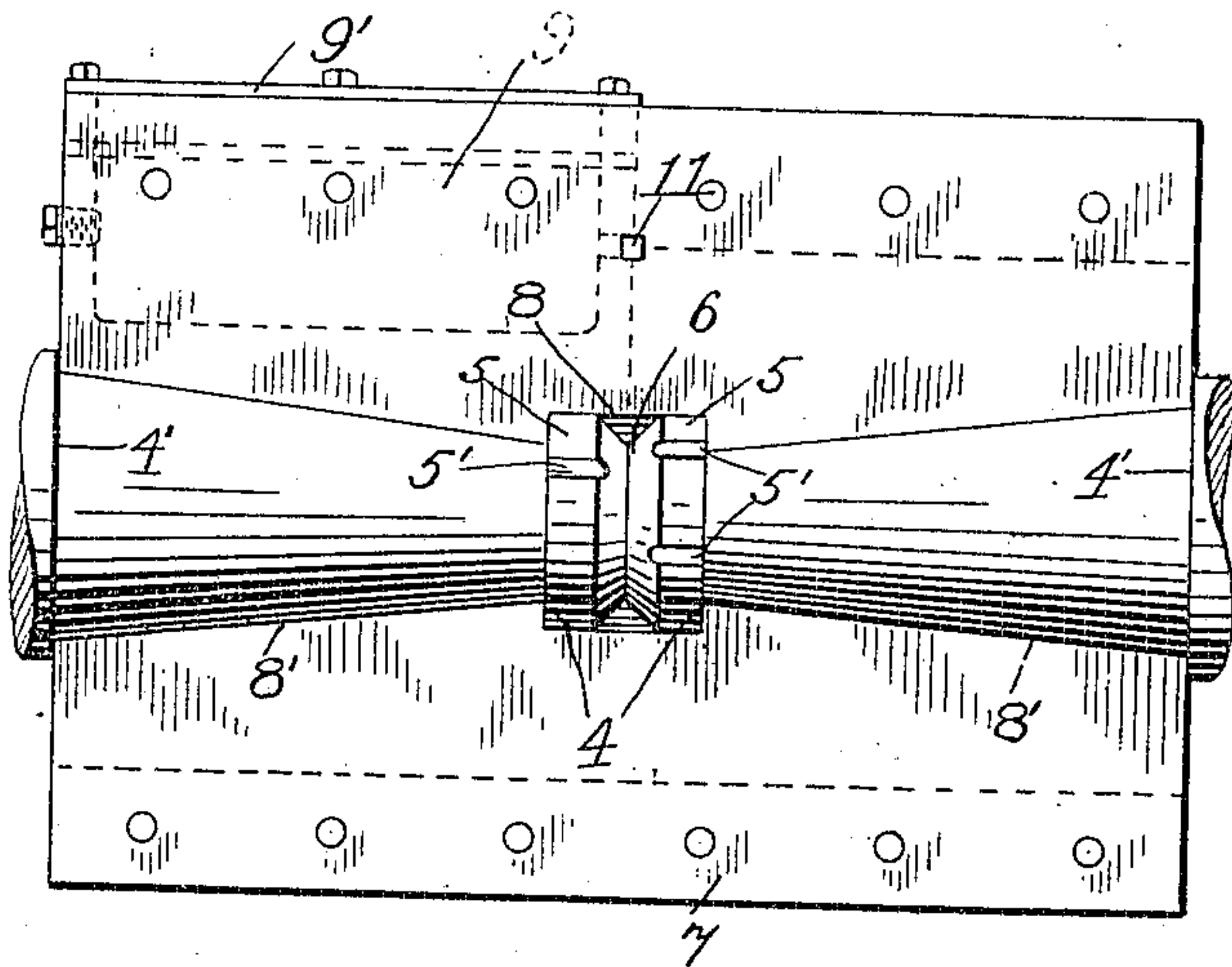


Fig. 3

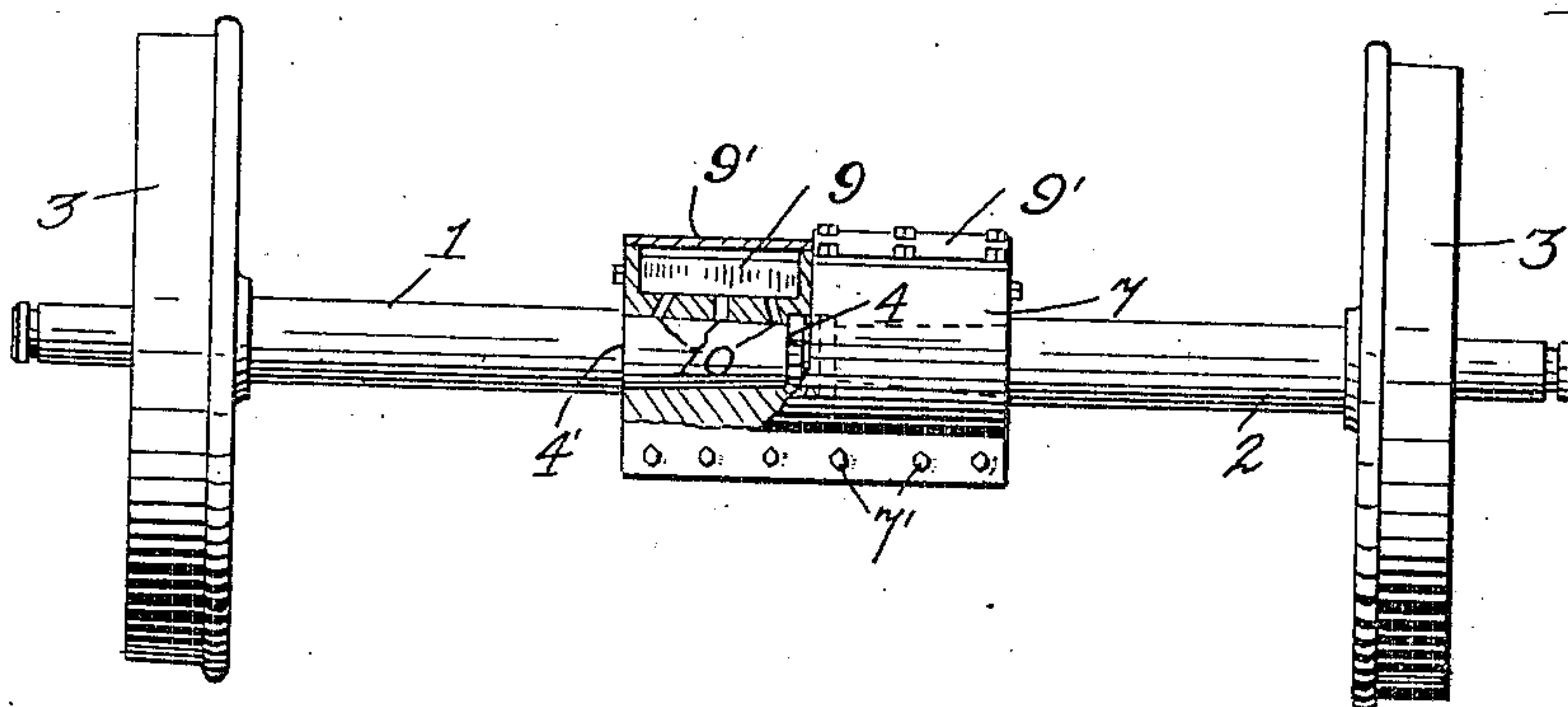


Fig. 4

Witnesses

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CAR-AXLE.

No. 837,167.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, OSCAR WILLIAMS, a citizen of the United States of America, and a resident of the town of Charleston, in the county of Kitsap and State of Washington, have invented certain new and useful Improvements in Car-Axles, of which the following is a specification.

The primary object of my invention is the production of an improved and simplified form of car-axle which allows the wheels on the opposite end portions thereof to rotate independently of one another, whereby the respective wheels in passing around a curve in the track can travel at different speeds to compensate for the difference in length of the parallel arcs traversed.

With the above and other objects in view, to be referred to in the following description, the invention consists of the construction and combinations of parts hereinafter described, and succinctly pointed out in the appended claim.

In the accompanying drawings, in which like numerals of reference indicate like parts throughout the several views, Figure 1 is a fragmentary view in top plan of the axle-sections and my improved coupling means therefor. Fig. 2 is a detail end view of the coupling removed and showing one of the coupling-sections in vertical cross-section. Fig. 3 is a view showing more clearly the construction of the contiguous end portions of the axle-sections and one of the coupling-sections receiving the same; and Fig. 4 is an elevation of a combined car-axle and wheels constructed in accordance with my invention, a portion of one of the coupling-sections being broken away.

Referring now to the drawings by numerals of reference, 1 and 2 indicate opposite sections which form the axle, and each of these sections is provided with a wheel 3 of any preferred construction. The inner end portions of these sections are formed with spaced-apart shoulders 4 and 4', those portions of the axle-sections between said shoulders being preferably tapered, as shown. The shoulders 4 are formed by suitable annular raised portions or beads 5, having oil-channels 5', and the adjacent side faces of these beads are turned or beveled (see Fig. 3) to form a channel, as 6, in which the lubri-

cant flowing from the axle-sections through the channels 5' is received and fed between the abutting ends of the axle-sections and to the exterior surfaces or peripheries of the beads 5, as is apparent.

The coupling is of novel construction, the same consisting of two sections 7, secured together by suitable means, as bolts 7', as shown, and provided in their inner faces with opposite recesses 8, forming a socket from which extends in opposite directions outwardly-tapering grooves 8', the opposite grooves of the respective coupling-sections forming bearings in which the axle-sections are journaled.

Reference-numeral 9 indicates reservoirs provided with removable covers, as 9', for the lubricant, there being one formed in each coupling-section, and from these reservoirs suitable ducts, as 10, lead to the respective bearings.

When the axle-sections are properly arranged in the coupling, the beads or raised portions 5 thereof engage in the socket formed by the recesses 8, and the end portions of said coupling abut the shoulders 4', so that the axle-sections are firmly held against any longitudinal movement. Communication is established between the reservoirs 9 by means of ducts 11, whereby the lubricant can flow from one reservoir into the other, and thereby during the filling operation requiring that the lubricant be poured directly into only one of the reservoirs.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

An axle comprising two axially-alined sections, each section being formed with spaced-apart shoulders, the portions of each section intermediate the shoulders being tapered, the contiguous ends of the sections being formed with beads and the abutting ends of the beads being beveled to form an oil-channel, said contiguous beads being grooved to form oil-passages in communication with said oil-channel, and a sectional coupling clamped about the axle, the inner faces of each coupling-section being formed with opposite tapering portions each embracing the tapering portion of each shaft-section and confined between the spaced-apart shoulders

thereof, said coupling member being formed
with an intermediate socket for the reception
of the beaded contiguous ends of the shaft-
sections and being further formed with oil-
5 chambers in communication with the taper-
ing portions for lubricating the engaging
faces of the axle and coupling.

Signed at Seattle, Washington, this 16th
day of March, 1906.

OSCAR WILLIAMS.

Witnesses:

STEPHEN A. BROOKS,
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