

(No Model.)

J. A. WYMAN.
AXLE LUBRICATOR.

No. 495,867.

Patented Apr. 18, 1893.

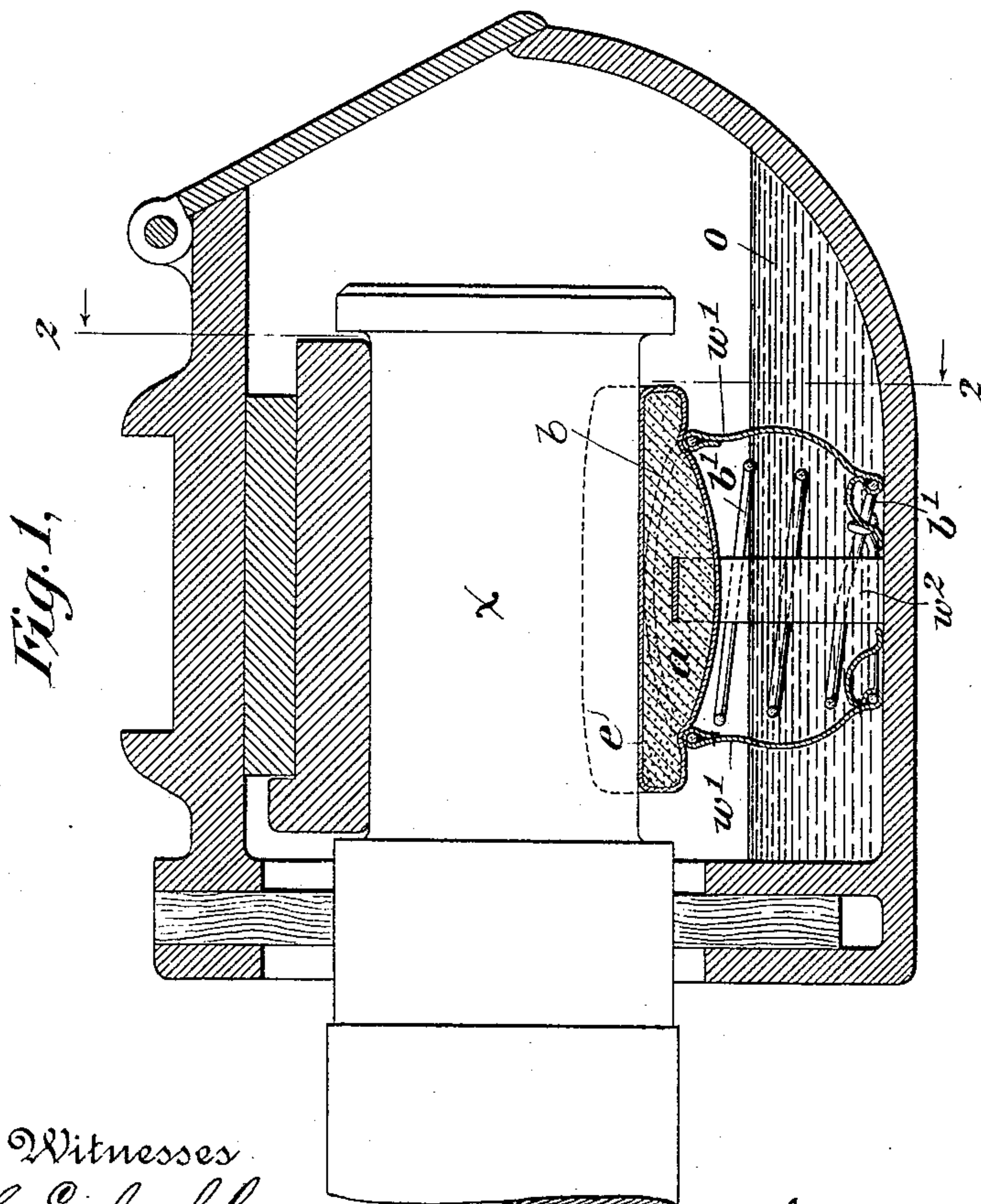
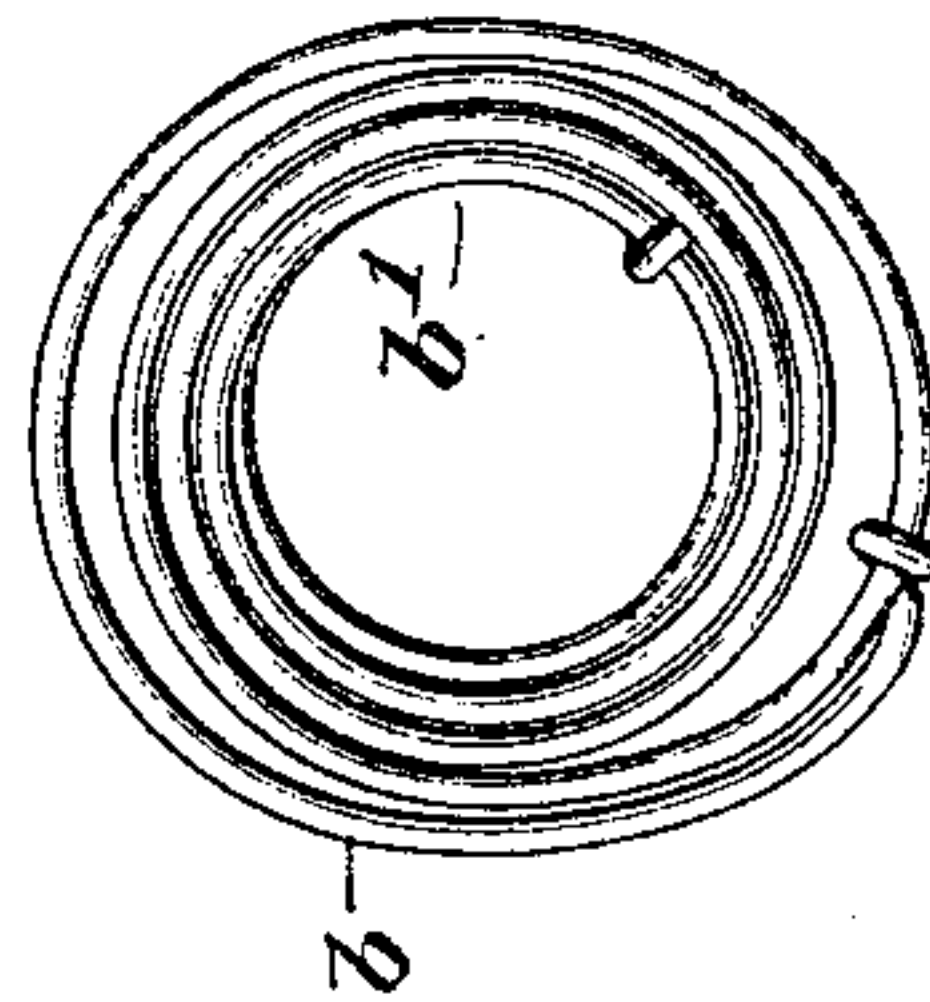
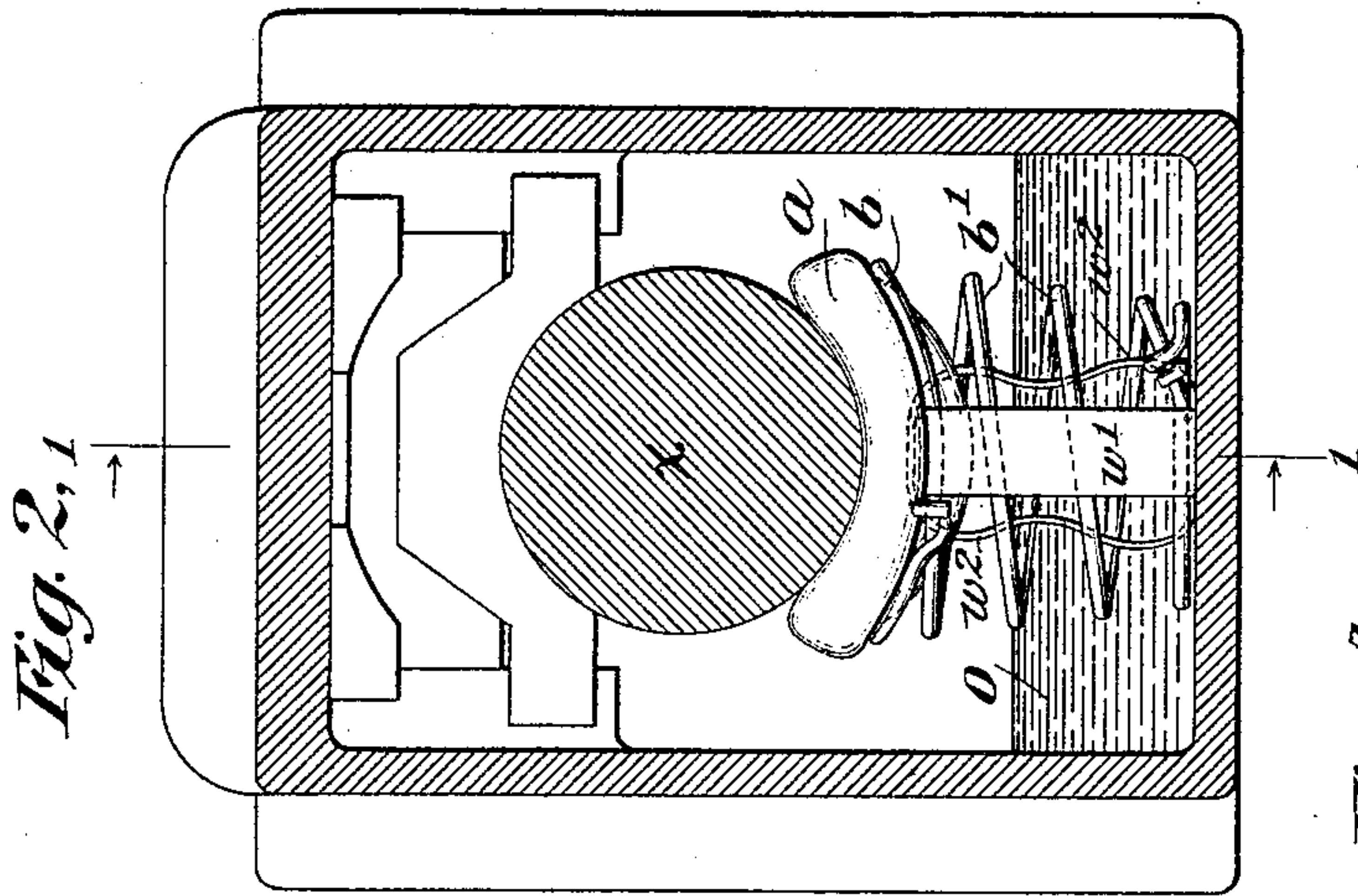
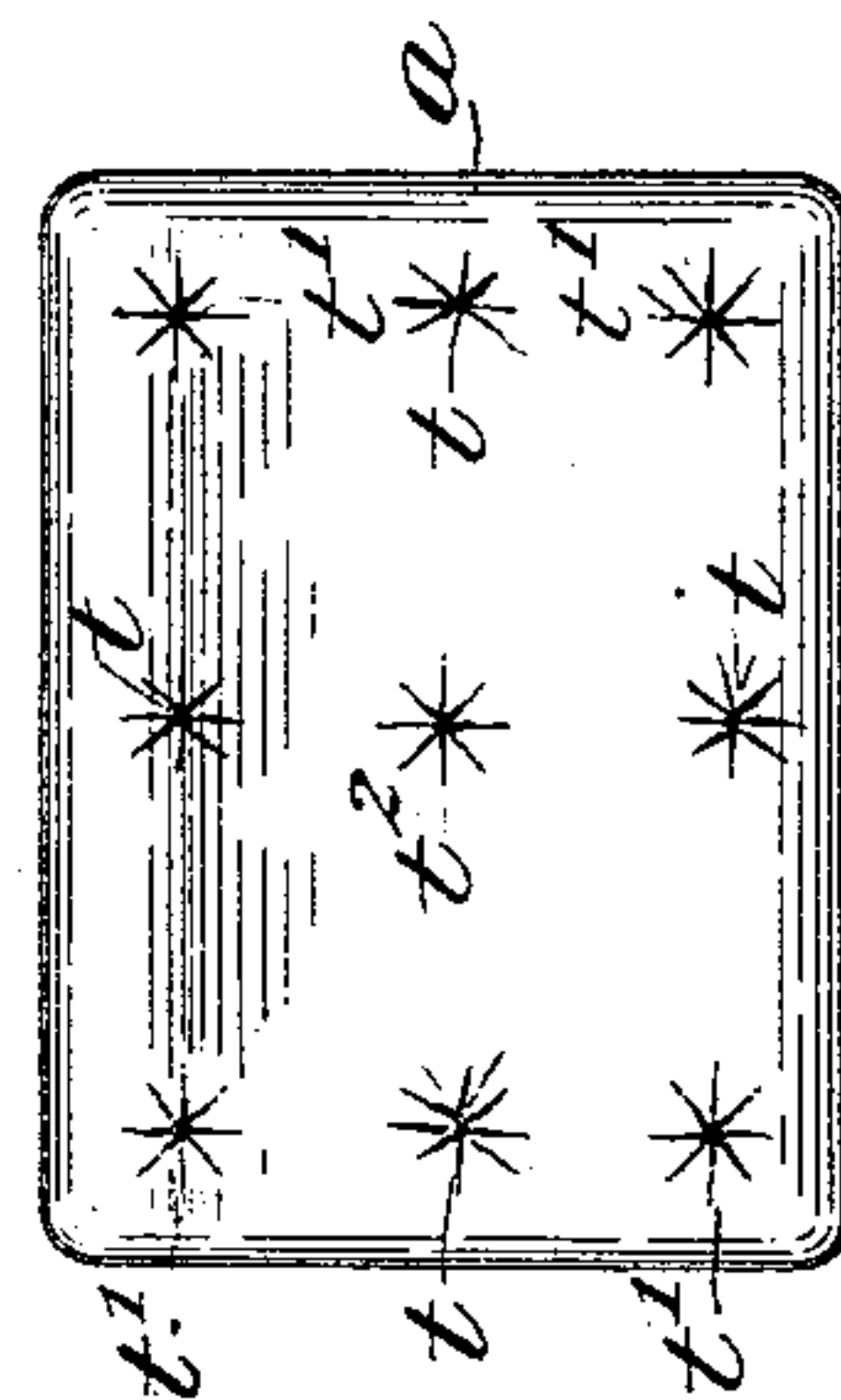


Fig. 3,



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN ADAMS WYMAN, OF NEW YORK, N. Y.

AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 495,867, dated April 18, 1893.

Application filed February 10, 1892. Serial No. 421,055. (No model.)

To all whom it may concern:

Be it known that I, JOHN ADAMS WYMAN, a citizen of the United States, and a resident of New York, in the county of New York, State of New York, have invented a new and useful Improvement in Car-Axle Lubricators, of which the following is a specification.

My invention relates especially to that class of car axle lubricators composed of a pad which is adapted to bear against the journal of the car axle, and a spring for supporting the lubricating pad within the axle box.

The essential object of my invention is to improve the operation of lubricators of this character by the introduction of novel features in details of construction that produce a more effective and perfect lubrication. These features are illustrated in the accompanying drawings in which—

Figure 1 is a sectional view of the car axle box showing the journal in position and the lubricating pad beneath it. Fig. 2 is an end view of the axle, pad, and supporting spring showing in detail the arrangement of the wicks for conveying the oil to the pad. Fig. 3 is a plan view of the pad showing the method of fastening the pad to the spring and the central wick to the pad. Fig. 4 is a plan view of the supporting spring showing the form given it.

Similar letters of reference indicate the same parts in all the figures.

x is the journal, a the felt pad, b is the shoulder of the spring, b' the spring proper, c the covering of the pad, w' holding wicks, w^2 transverse wick, t and t^2 are fastenings, and t' are tufts at corners.

I am aware that the style of car axle lubricator here shown is not new but was patented broadly to one C. D. Flynt, August 30, 1887, No. 368,937 and I desire only to obtain a patent for improvements in certain details of construction that render such a lubricator thoroughly operative and efficient. First I prefer to make the lubricating pad " a " of felt as it seems to have better properties for holding the oil than other substances. The pad rectangular in form and of a suitable size to cover the lower third of the journal is provided with a suitable covering of cloth stitched around it at the edges. At four points near the

middle of its sides and ends it is fastened by strong stitching to the shoulder or supporting part of the spring. Four other stitches near the corners of the pad and one in the middle for fastening the central wick Fig. 3 leave its upper surface comparatively smooth and even so that it can bear against the axle at almost every point.

As particularly distinguishing my invention from that shown in the patent granted to Flynt above cited attention is directed to the supporting spring Figs. 1, 2 and 4 which is given the form shown which it must have, to be effective; first the upper coil is given a peculiar curved shape such that if laid against a cylinder a little larger than the axle journal it would touch the surface of the cylinder at every point. The pad being fastened to this upper coil, then assumes a hollow semi-cylindrical form, making it fit closely to the upper surface of the journal which is essential to a good lubricating surface. Second the coiled spring tapers slightly toward the bottom; that is to say the upper supporting coil is largest of all, being large enough to support the edges of the pad no matter what the size might be; the next is a little smaller and so on down, the lower supporting coil which, resting against the bottom of the axle box, must conform to a plane surface is preferably made somewhat larger in diameter than those above it, which plan further assists the folding together of the spring. The construction admits of the spring being squat together, the lower coils passing freely inside the upper ones as the spring is flattened down: this without disturbing the position against the pad. Provided with such a spring, the lubricator can be placed in a box having a very shallow well without disturbing its bearings against the journal. I prefer leaving the spring without cloth or other covering both around its sides and at the bottom, the pad to be made of any suitable thickness and of any suitable porous material. There are four wicks that convey oil from the well of the axle box up to the pad which rubs it against the axle journal as the latter revolves. These wicks are attached to the pad in a particular way, and thus secured, they serve a definite purpose, and materially increase the efficiency

of the device. Two of them w' Figs. 1 and 2 on opposite sides of the spring have their upper and lower ends securely fastened to the upper and lower coils of the supporting
5 springs; these serve both as oil conveyers and as handles to insert the lubricator into the box or to remove it as well as to keep the spring upright in place. The other wick w^2 Figs. 1 and 2 is a single piece of wicking
10 which is passed partly through the felt pad having its middle point embedded in the substance thereof and its ends hanging down inside the coils of the spring into the oil in the well. This arrangement, which is important,
15 allows this wick which is in fact a double one, to carry the oil directly into the substance of the pad giving much better results than if it were simply fastened to the under side of the pad, or only in contact with it like the other
20 two. Arranged in this way, a single stitch through the center of the pad serves to hold this wick in place, as well as to make an additional tuft in the pad. These details of

construction render such a lubricator efficient in operation. 25

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

1. In a car axle lubricator a lubricating pad carried by a supporting coiled spring the upper coil of which is made conformable to a cylindrical surface. 30

2. In a car axle lubricator a pad supported by a coiled spring the coils of which decrease in size from top to bottom, the upper coil being expanded to support the edges of the pad, and made conformable to a cylindrical surface and the lower coil to a plane surface whereby the pad is supported in the axle box. 35

In testimony that I claim the foregoing as my invention I have hereto subscribed my name in the presence of two witnesses. 40

JOHN ADAMS WYMAN.

Witnesses:

E. BOSCH,
EBEN B. CRANE.