

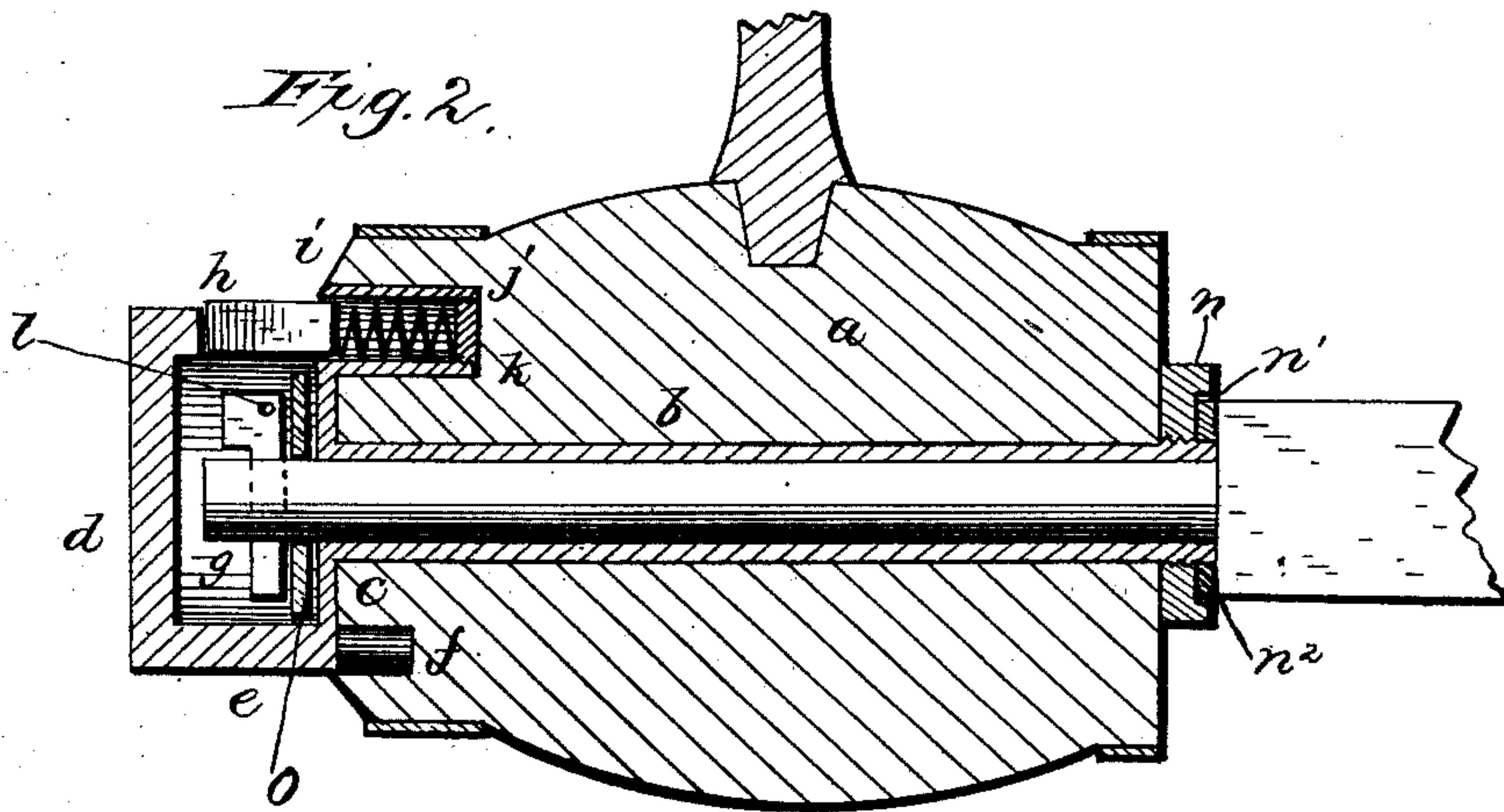
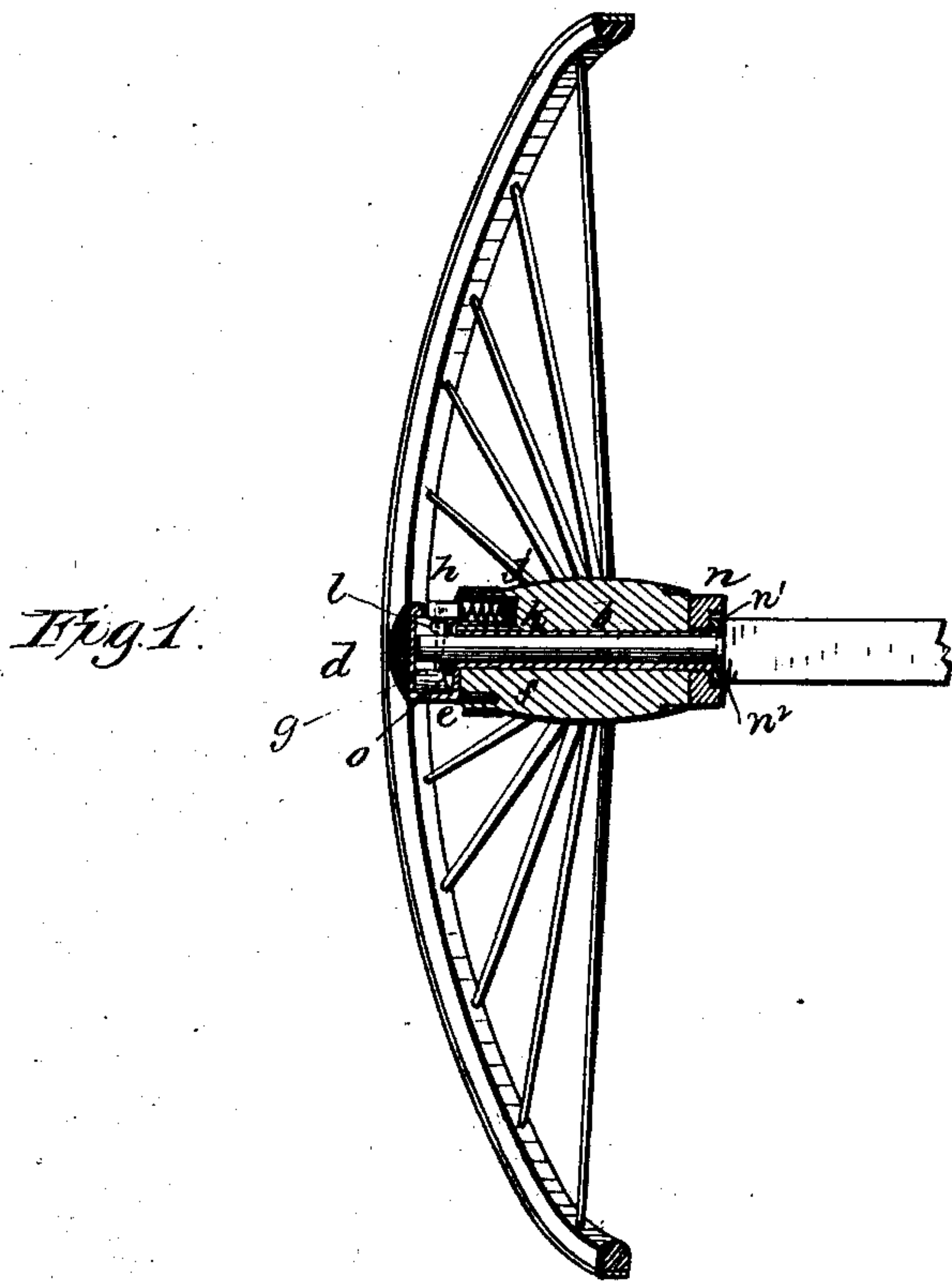
(No Model.)

J. R. ANDERSON.

AXLE LUBRICATOR.

No. 244,782.

Patented July 26, 1881.



Witnesses
F. L. Ouraud
J. J. McCarthy

Inventor,
James R. Anderson.
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UNITED STATES PATENT OFFICE.

JAMES R. ANDERSON, OF LONACONING, MARYLAND.

AXLE-LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 244,782, dated July 26, 1881.

Application filed May 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. ANDERSON, a citizen of the United States, residing at Lonaconing, in the county of Alleghany and State of Maryland, have invented certain new and useful Improvements in Wheels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of this invention is to adapt the invention shown in my Patent No. 240,000, granted April 12, 1881, to wooden, partly wooden, and metallic or other than one-piece hubs; and to this end this invention consists in a solid lubricating axle-box adapted for application to such hubs, substantially as herein-after specified and claimed.

In the accompanying drawings illustrating my invention, in the two figures of which like parts are similarly designated, Figure 1 is a transverse vertical section, in perspective, of a wooden wheel provided with my improvement; and Fig. 2 is a longitudinal vertical section of a hub provided with my said improvement.

The wheel and hub *a* may be of any approved construction. The bore of the hub may be straight, tapered, or otherwise shaped, to receive a corresponding pipe or box, *b*, into which fits the similarly-shaped axle arm or nib 2. This box *b* is made solid, with a flange, *c*, at right angles thereto, a head, *d*, parallel with said flange, and a shell, *e*, connecting the two. A pin or lug, *f*, extends rearwardly from the flange *c*, and said flange, shell, and head *d* are preferably made somewhat thicker than the pipe in order the better to resist concussion. The shell, head, and flange *c* form a chamber, *g*, at the end of the pipe *b*, which I utilize as a lubricant-receptacle, from which lubricating material is supplied to the axle. Access is had to this chamber through an opening, *h*, which is normally tightly closed by a slide, *i*, projected outwardly into the closed position by a spring, *j*, in the shell *k*, formed with or attached to the shell *e* or flange *c*. This opening also subserves the purpose of permitting the manipulation of a linchpin or other axle-fastening, *l*. The box

or pipe *b*, its flange *c*, head *d*, shell *e*, and pin *f* are made in one piece by casting in suitable molds, and constitute, in connection with the spring-slide, my improved lubricating axle-box. This axle-box is applied to a hub by fitting the pipe *b* in the bore of the hub, providing recesses therein to receive the flange *c* and pin *f* and shell *k*, and securing the pipe by a nut, *n*, on its threaded inner end. When the pipe is to be other than a straight tube it may be made separate from the lubricant-chamber, and after being inserted in the hub-bore it will be connected to said chamber by a tight joint.

In casting my box I may cast loosely in the lubricant-chamber a washer, *o*, to be interposed between the flange *c* and linchpin, to take the wear.

This improved lubricating axle-box is primarily dust-tight, and absolutely prevents access of dirt, grit, &c., to the axle-arm. Its shell *e* and head *d* form the ordinary dust-cap in appearance, and thus the hub and wheel have the usual appearance. It has fewer parts, costs less, is more durable, and quite as efficient as, if not more so than, the ordinary boxes.

The pin *f* is used to enter the hub and prevent the turning or dislocation of the box; but the shell *k* may be relied upon for this purpose, if desired. When the pin and shell *k* are opposite the box will be most securely retained; hence I prefer to use such pin.

The nut *n* may have a recess, *n'*, for an axle-washer, *n*².

What I claim is—

1. A wheel provided with a hub the axle-box of which is made with the dust-tight lubricating-chamber *g*, having an automatically-closed opening therein, and the pipe *b* connected with said chamber, substantially as described.

2. A hub, *a*, combined with the one-piece self-lubricating axle-box composed of the lubricating-chamber *g*, having the self-closed opening, and adapted to receive the hub-attaching devices, combined with the pipe *b* to receive the axle, substantially as described.

3. The combination of the pipe *b*, flange *c*, head *d*, shell *e*, pin *f*, and spring-slide *i*, substantially as described.

4. The combination, with a hub, of a pipe, *b*, a lubricating-chamber receiving the axle-securing device, a spring-closed opening to said

chamber, and a nut, *n*, to fasten the pipe in the hub, substantially as described.

5 The combination, with the lubricating-chamber of a self-lubricating axle-box, of a washer cast loose in said chamber, substantially as described.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in presence of two witnesses.

JAMES R. ANDERSON.

Witnesses:

JOSEPH MYERS,

S. M. PETRIE.