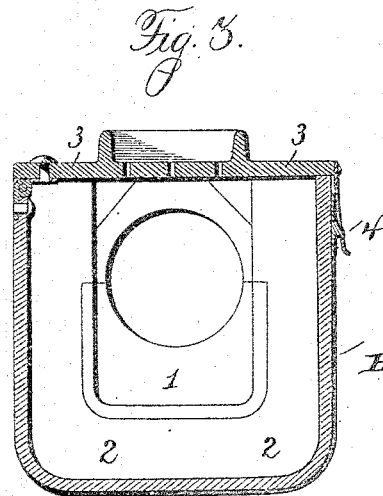
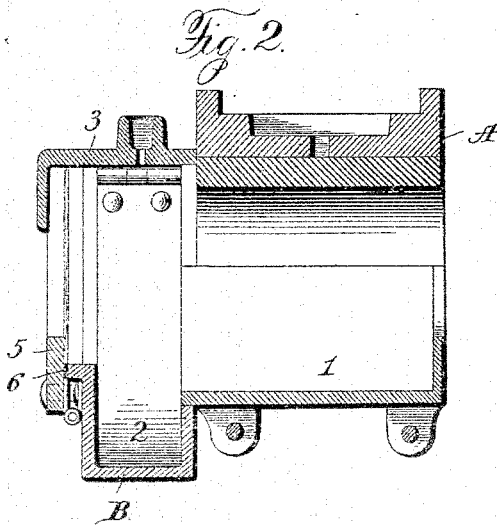
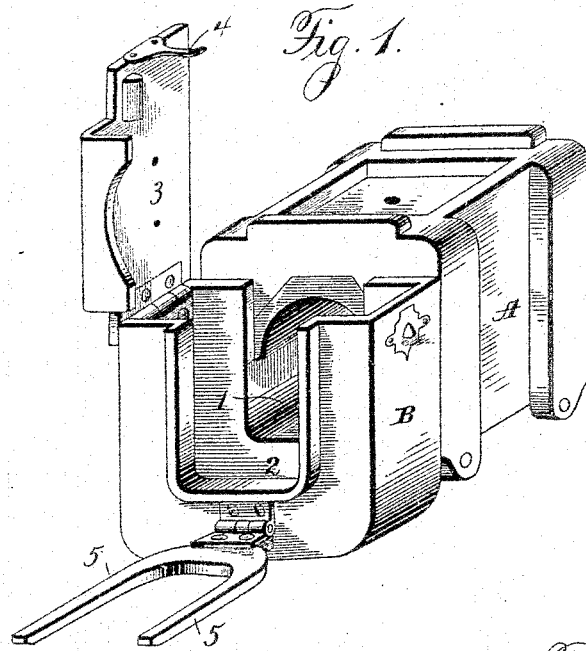


(No Model.)

J. McG. SMITH.
AXLE BOX.

No. 491,380.

Patented Feb. 7, 1893.



Witnesses
Jas. Hutchinson.
G. F. Downing.

Inventor
John McGregor Smith
By *H. A. Seymour*
Attorney

UNITED STATES PATENT OFFICE.

JOHN MCGREGOR SMITH, OF CHARLESTON, SOUTH CAROLINA.

AXLE-BOX.

SPECIFICATION forming part of Letters Patent No. 491,380, dated February 7, 1893.

Application filed September 16, 1892. Serial No. 446,095. (No model.)

To all whom it may concern:

Be it known that I, JOHN MCGREGOR SMITH, of Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Locomotive Axle-Boxes; 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.

My invention relates to an improvement in locomotive axle boxes, the object being to attain facility in gaining access to the axle for removing or supplying waste and oil; to lessen the liability of trouble arising from hot journals on locomotives and high speed locomotives, and to provide an effectual protection against the entrance of all foreign matters such as sand and gravel, always more or less likely to enter the boxes owing to the carelessness of section hands in leaving the same above the surface of the rails, and also to prevent the entrance of cinders which are always more or less inclined to work into these boxes.

With these ends in view my invention consists in certain novel features of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved axle box, the covers being partly open to indicate how access is made possible to the interior. Fig. 2 is a longitudinal section, and Fig. 3 is a transverse sectional view through the front or outer end of the box.

A represents the usual box attached to the locomotive and resting on the axle inside of the wheel. This box is made in sections, the outer end B of which is furnished with the gland or duct 1 which is capable of sliding in and out of the main box A and is constructed at its inner end to form a complement of the bearing about the axle. This duct or gland 1 is made in the form of a channel having considerable depth below the axle and it is adapted to be filled in the usual manner with waste or other absorbent material which is kept saturated with oil and continually oils

the axle at this point. This duct or gland 1 leads at its outer end into a deeper reservoir 2 formed in the bottom of the outer section B of the box. The reservoir 2 is filled with waste and this is kept saturated all the time with oil. Over the top of the reservoir is hinged a cover 3 this being preferably furnished with a latch 4 at its free end for locking it shut. Also the outer end of section B is provided with a hinged cover 5. Said cover is hinged at its lower end to the box and an overhanging lip formed on cover 3 holds this cover 5 closed. A packing 6 of rubber or soft material is located on the outer face of section B and in this manner an oil tight joint is formed between the box and cover 5.

The cover 3 is provided with a cup at the top into which the oil is poured and in the bottom of the cup perforations are made to allow the oil to drop into the reservoir below.

Although the duct or gland is capable of being pulled out in the usual manner and for this reason is provided with a removable pin 7 for holding the sections together, yet it is one of the main ideas of my invention to avoid the necessity of pulling the duct or gland out, so in lieu thereof, the covers 3 and 5 are simply thrown open and the attendant may readily get at the interior.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention and hence I do not wish to limit myself to the exact construction herein set forth, but,

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—

1. In a locomotive axle box, the combination with a duct or gland having a reservoir extending below the bottom of the latter, of a separate hinged door for the front and top of the reservoir, substantially as set forth.

2. The combination with a duct or gland, and an oil reservoir in communication therewith, of a cover for the top of the reservoir and one for the front thereof, one adapted and constructed to hold the other closed, substantially as set forth.

3. In a locomotive axle box, the combina-

tion with an oil reservoir provided with an open front, of a hinged rim or cover, and a packing interposed between the outer face of the reservoir and the cover, and a hinged top
5 adapted to close over the cover whereby to keep it closed, substantially as set forth.

4. The combination with a box composed of two sections one having a duct or gland constructed to slide in the other, of a reservoir
10 formed at one end of the duct or gland, and

covers for the front and top of this reservoir, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN MCGREGOR SMITH.

Witnesses:

R. M. WEST,

J. C. REYNOLDS.