

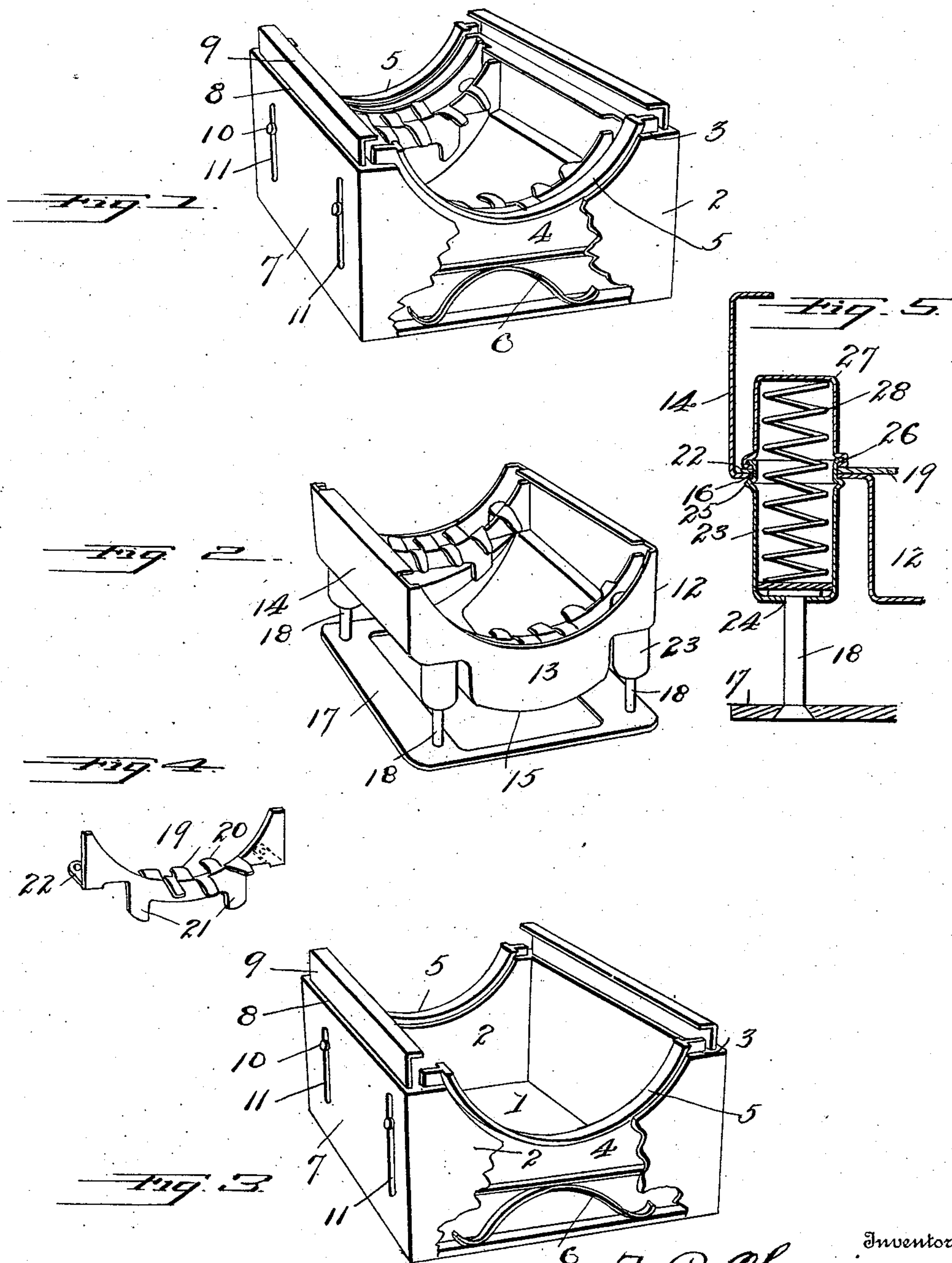
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PATENTED JULY 16, 1907.

F. B. HARRISON & L. Y. WILLIAMS.

JOURNAL BOX LUBRICATOR.

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Witnesses

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# UNITED STATES PATENT OFFICE.

FRANK B. HARRISON AND LACEY Y. WILLIAMS, OF TOLEDO, OHIO.

## JOURNAL-BOX LUBRICATOR.

No. 860,131.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed September 12, 1906. Serial No. 334,295.

*To all whom it may concern:*

Be it known that we, FRANK B. HARRISON and LACEY Y. WILLIAMS, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have  
5 invented new and useful Improvements in Journal-Box Lubricators, of which the following is a specification.

Our invention relates to lubricators which are located within journal boxes and especially such as are adapted  
10 for use in connection with locomotive drive and truck axle boxes where the boxes are located inside the wheels and are open at the bottom to allow of their removal from the axles and also to permit the adjustment of the cellars beneath the axles and in line with  
15 the bearings. As is well known, great difficulty has been experienced in effectively lubricating such bearings so they will not become hot in service, owing in part to the construction of the boxes which are more or less open at the ends and consequently do not exclude  
20 dust and dirt, and the great weight to which the bearings are subjected.

The object of our invention is the provision of a lubricator which shall exclude dust and dirt, retain the waste in proper position, require a minimum quantity of oil to secure effective lubrication, and prevent  
25 the bearings becoming hot and the excessive wear of the brasses.

With this end in view our invention consists in certain novelties of construction and combinations of  
30 parts hereinafter set forth and claimed.

The accompanying drawings illustrate an example of the physical embodiment of the invention.

Figure 1 is a perspective view of a cellar and lubricator. Fig. 2 shows the lubricator proper separate  
35 from the cellar. Fig. 3 shows the cellar proper with the pan and base removed. Fig. 4 is a perspective view of a waste retainer. Fig. 5 is a section through a corner of the pan and base in line with a post, the parts being upon a relatively large scale to more clearly  
40 show the construction.

Referring to the several figures, the numeral 1 designates the bottom of the cellar; 2, the end walls with curved top edges; 3, recesses or slots in the end walls; 4, guards in the slots; 5, the flanged, concave top edges  
45 of the guards which bear against the axle; 6, springs at the bottoms of the slots 3 which force and hold the guards against the axle; 7, the side walls of the cellar; 8, slots or recesses in the walls; 9, guards, each having a flange at its top edge and provided with two pins  
50 projecting through the slots 11, which pins limit the movements of the guards when forced upwardly by springs, like those designated by numeral 6, located at the bottoms of the recesses; 12, the pan; 13, the end walls of the pan having curved top edges; 14, the side  
55 walls of the pan each having a flange at the top edge; 15, the concave bottom of the pan; 16, holes through

the pan, one at each of the four corners; 17, the supporting base; 18, four headed posts fixed in the base and located in line with the holes 16 through the pan; 19, waste retainers, each provided with prongs 20 bent  
60 alternately in opposite directions, two legs 21 which rest upon the bottom of the pan, and two perforated projecting ears 22 by which the retainer is held in place; 23, one of the four tubes, each having a hole  
65 24 through the bottom, said tube being loosely mounted upon a post 18 as shown so it can move vertically; 25, a crimp made in the wall of the tube and which when the top end of the tube is passed through a hole 16 in the pan bears against the metal which bounds the  
70 said hole; 26, a flange or crimp at the top end of the tube; 27, a cap passed over the top end of the tube 23, and pressed down upon the ear 22 of the waste retainer, which latter is passed over the top end of tube 23 and in frictional contact with the metal bounding the hole  
75 16 in the pan, said tube 27 having its edge upset or bent about the flange or crimp 26 at the top end of the tube; and 28, is a coiled spring within the tube and cap, as shown.

It will be observed that the springs 28 force the pan upwardly, and that the waste retainers are held in  
80 place by the perforated ears 22 clamped between the tubes and caps. The base and pan are adapted to fit within the cellar and the curved edges of the top end walls of the pan when so disposed will be in line with the concave flanged top edges of the end guards of the  
85 cellar when said cellar and the lubricating pan are in use and bear against the under surface of the axle, so that dust and dirt are effectively excluded. Guards 9, forced upwardly by the springs in the slots to positions adjacent the sides of the axle also prevent the  
90 entrance of dust and dirt. The waste retainers having the prongs effectively prevent the waste in the pan working over the edges at either end of the same, and the springs within the tubes and caps at the four corners of the pan press the waste saturated with oil and retain-  
95 ers against the under surface of the axle opposite the bearing surface.

The cellar and lubricator are, of course, to be adapted, as regards size and relative dimensions, to the axle box in connection with which they are to be used; and  
100 the cellar is held in position by bolts or lugs in any well known or desirable way.

From the foregoing description it becomes clear that we have produced a lubricator especially adapted for use with axle boxes located inside the wheels, and  
105 which is effective for the purposes specified.

What we claim is:

1. The combination with a cellar having end walls with curved top edges and movable side guards, of a lubricating pan with end walls having curved top edges; said movable  
110 side guards serving to exclude dust from the waste within the pan.
2. The combination with a cellar of guards at the ends

with curved top edges springs for forcing the guards upwardly, a pan located within the cellar; and springs for forcing the pan upwardly; the top edges of the end walls of the pan being curved.

- 5 3. The combination with a cellar having end walls with curved top edges, of a lubricating pan located within the cellar, said pan having end walls with curved top edges; springs for forcing the pan upwardly; and waste retainers having prongs, said retainers being located at each end
- 10 of the pan and adjacent the end walls.
4. A lubricating pan having end walls with curved top edges and two waste retainers, one retainer located at each end of the pan and adjacent an end wall, said retainers being provided with prongs for the purpose specified.
- 15 5. A lubricating pan having end walls with curved top edges, side walls, a bottom, and waste retainers one located adjacent each end wall; said waste retainers having ears, and means for securing said ears to the pan.
6. The combination with a pan having a bottom with

holes therethrough, end walls, and side walls, of waste retainers having perforated ears; a base piece with posts; tubes; caps; and springs; said tubes loosely engaging the posts and the top ends of the tubes located within the holes in the bottom of the pan and the holes in the ears of the retainers; said caps secured to the top ends of the tubes; and the springs located within the tubes and caps.

7. The combination with a pan, of a waste retainer having perforated ears 22, prongs 20, and legs 21; and means for securing the ears to the pan adjacent the end wall thereof.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK B. HARRISON.  
LACEY Y. WILLIAMS.

Witnesses:

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