(No Model.)

W. H. WRIGHT.

DUST GUARD FOR CAR AXLE BOXES.

No. 518,385. Patented Apr. 17, 1894.

Fig.1

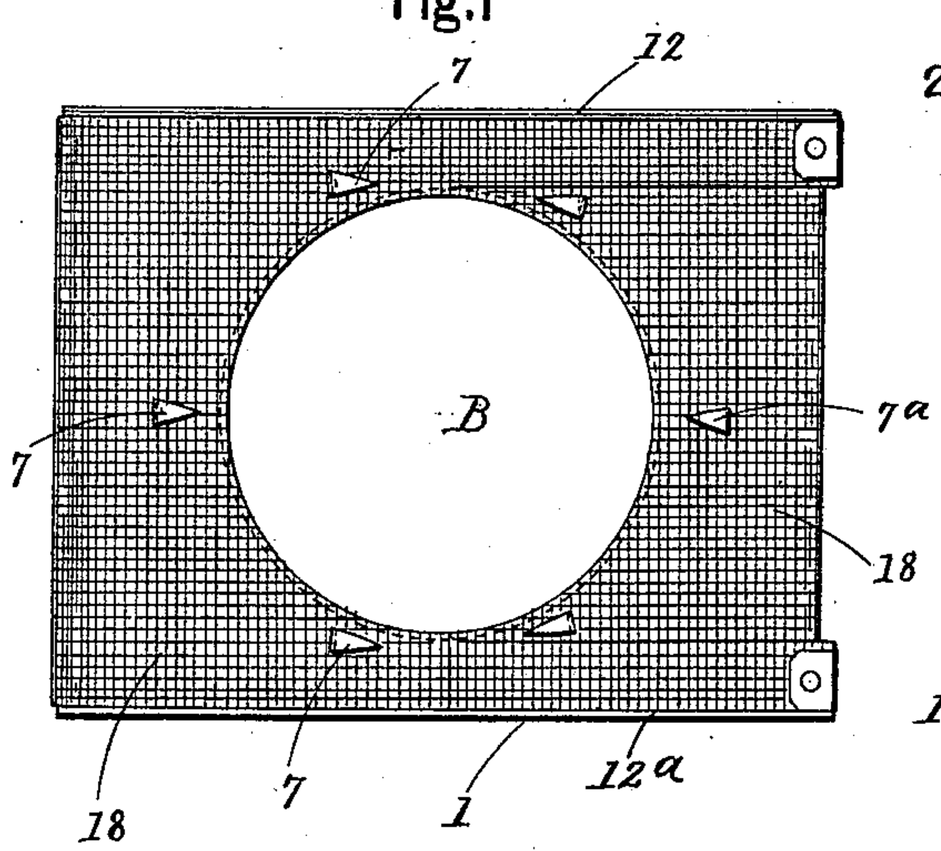


Fig.2

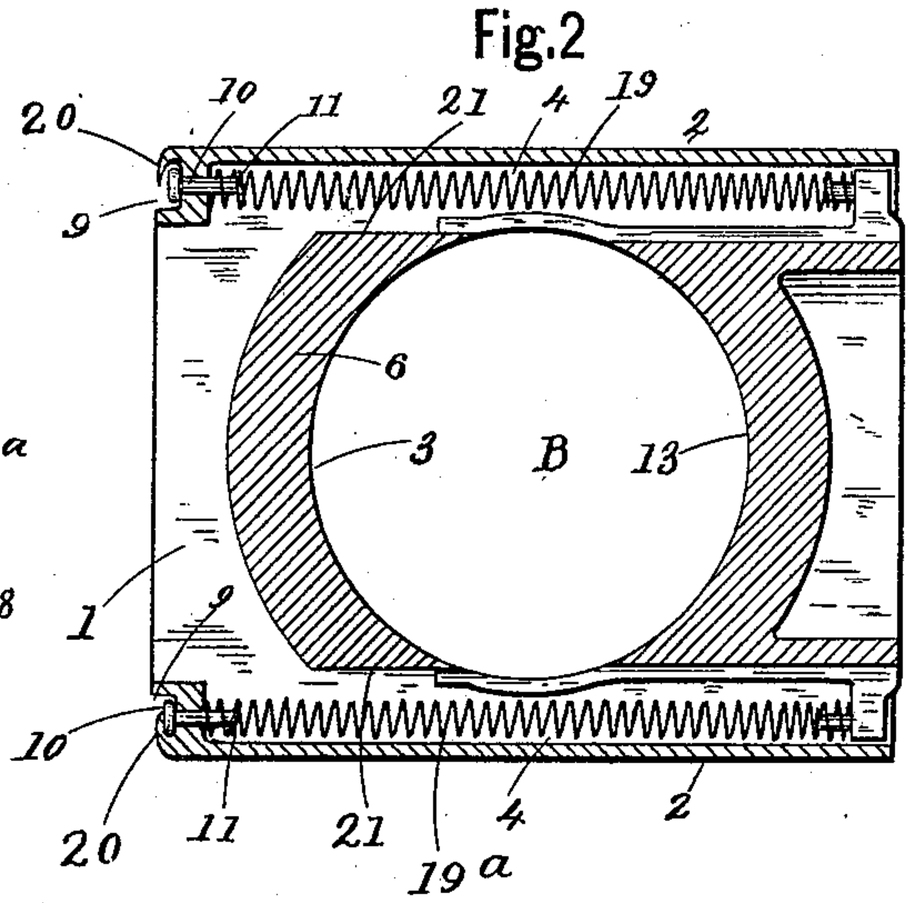


Fig.3

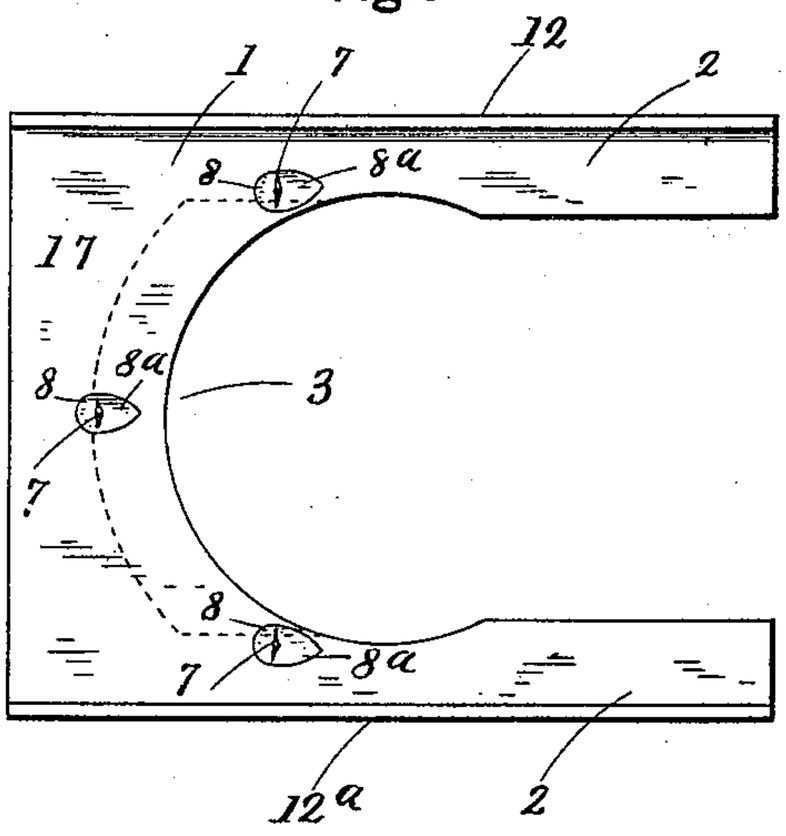


Fig.4. Fig.5.

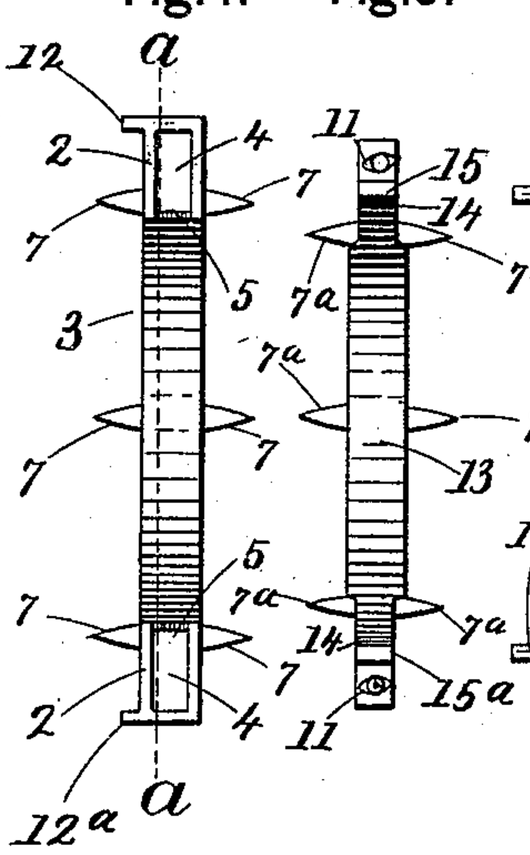
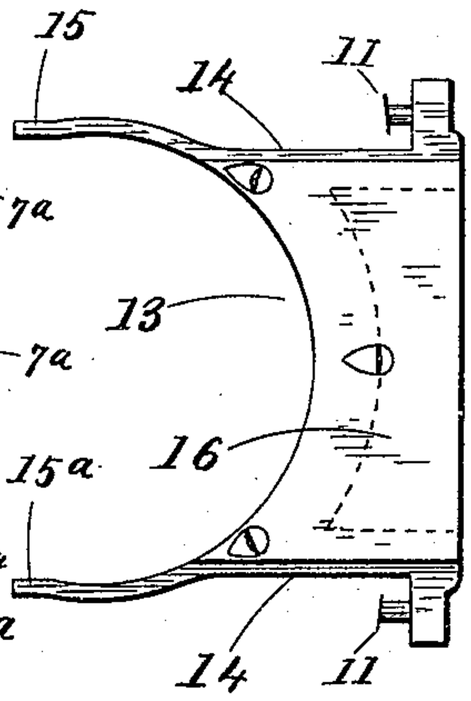


Fig.6



Witnesses.

Arthur J. Sangster.

Arthur Kemp

William H. Wright, Inventor.

By James Sangster.

Attorney

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. WRIGHT, OF BUFFALO, NEW YORK.

DUST-GUARD FOR CAR-AXLE BOXES.

SPECIFICATION forming part of Letters Patent No. 518,385, dated April 17, 1894.

Application filed July 8, 1893. Serial No. 479,899. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WRIGHT, a citizen of the United States, residing in Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Dust-Guards for Car-Axle Boxes, of which the following is a specification.

The object of my invention is to provide an efficient and reliable means for packing the shaft of a car axle and thereby guard the working parts and the lubricating material within the axle box, from dust and other abrading material that generally get into a car axle box and result in great injury and increased wear to the working parts. Its object is also to guard against the leakage and escape of the lubricating material from the axle box and thereby prevent the consequent loss and waste of that material, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved dust guard complete. Fig. 2, is a vertical longitudinal section through a complete dust guard, cutting off one side in or about line *a a*, Fig. 4. Fig. 3 is a detached side elevation of that portion of the dust guard having slideways to receive the sliding portion of the dust guard, the elastic or woven covering of the same being omitted. Fig. 4 is a front edge elevation of the same looking into the semicircular opening and open slideways. Fig. 5 is an edge elevation of the sliding portion of the dust guard, looking in toward the semicircular open portion. Fig. 6, is a side elevation of the dust guard, the elastic or woven covering being omitted.

Referring to said drawings, 1 represents the slideway portion of the dust guard or packer, it is provided with two forwardly projecting slideway portions 2, and with a semicircular opening adapted to fit part way around the car-axle, the portions, 2, are each provided with a hollow slideway, 4, which extends the whole length of the dust guard or packer at the top and bottom (see Fig. 2), each slideway being open at the inner side substantially as shown at 5, in Fig. 4. The semicircular concave opening, 3, extending round about two-thirds of a circle is formed by the solid semicircular metal portion, 6, see Fig. 2, where a section is shown through this portion. On each side of the portion, 1, is a series of outwardly projecting sharp pointed pieces, 7, at the front and rear of each of these projections, 7, is a depression 8—8ª. The object of these depressions is to permit the pointed pieces, 7, to be bent over so that they will lie flat even with the surface of the elastic or woven covering that may be put on.

At the back end of the slideway portion, 1, at the top and bottom corners is a small depression or recess, 9, see Fig. 2, having a hole through it to receive a small bolt, 10, each bolt having a large head to prevent it from passing through the hole in which it is placed and having at its opposite end two small projecting flanges, similar to those shown in Fig. 6, and marked, 11. Their object will be explained farther on. The slideway portion, 1, is also provided with two side projecting fitting strips 12 and 12ª, see Figs. 1, 3 and 4. These strips, 12 and 12ª, being thin can be easily filed or cut down so as to be quickly adapted to fit nicely in the usual packing chamber of a car axle box, substantially such a packing chamber as is shown in Fig. 2 of my patent dated April 1, 1884, No. 296,098, in which G— G— represent the car box, X the journal, X′, the axle and K the inner wall of the packing chamber.

In Fig. 6, I have shown a separate or detached view of that portion of the packer adapted to slide into the slideways of the portion, 1. It is also provided with a semicircular concave, 13. On each opposite narrow side is a tongue 14, these tongues extend out forward and each terminate in the projecting parts 15 and 15ª, all of which are adapted to fit nicely so as to slide in the openings or slideways, 4, in the said portion 1, the outer sides, 16, being of even thickness with sides 17 of the portion, 1. This part is shown in position in the portion, 1, in Fig. 2, also in Fig. 1, where the completed device is shown provided with a covering of heavy cotton duck, 18. This covering may be made of felt or any suitable material adapted for the purpose. In practice I find cotton belting of the proper width answers a very good purpose, it is prepared for this purpose by being boiled in coal tar and is thereby made impervious

to oil. This covering when put on is firmly secured in place by bending the pointed projecting portions 7 and 7ª, down flat to the flexible or elastic covering. The part 1, and the part that slides into it are each covered with this material and then put together as shown in Fig. 1. The points 15 and 15ª, project forward beyond the center of the circular opening, B, and are each formed with a flat portion which rests or bears against the flat parallel sides, 21, of the solid semicircular portion, 6, see Fig. 2, so that as the parts wear and are drawn toward each other the parts, 15, and 15ª, will always keep a tight or close joint between them as the movement of the parts will leave no opening. To hold the two parts together, and the elastic material close to and around the shaft, which is made so that the circular opening through it, is smaller than the circular opening through the metal portions so that it will hug close to the periphery of the axle which passes through it, and thereby prevent any oil which may swash around within the axle box from getting through, I employ two spiral springs 19 and 19ª. These springs are secured by screwing the flanged portions, 11, into the ends of spiral springs so as to hold them securely. These springs, as will be seen, are wholly inclosed within the packer when the two parts of the packer are put together. The object of this construction is to protect the springs from water getting in and freezing, thereby rendering them useless, and also from dust or dirt of any kind.

It will be noticed that the rivets or bolts, 10, are securely kept in the recesses, 9, by means of a projecting piece of metal, 20, which is bent over the head of each bolt, substantially as shown in Fig. 2.

From the above description it will be seen that when the packer is fitted in the packing chamber of an axle box as herein above described, the springs 19 and 19ª, will cause the parts to closely encompass the axle and form a joint around it sufficiently tight to keep out dust and dirt and at the same time prevent the oil that may swash about from passing outward.

I claim as my invention—

1. In a dust guard for car axle boxes, a slideway portion, 1, having two hollow longitudinal slideways open on their inner sides directly opposite each other, a concave portion, 3, adapted to encompass more than half of the periphery of the axle and having hollow parallel slideway portions, in combination with a sliding portion forming the other part of the packer and adapted to partly encompass the periphery of the axle, and having slideway tongues whose ends project forward and are adapted to move in the slideways of the portion, 1, and springs wholly inclosed within the packer for drawing the two parts of the packer together, substantially as described.

2. A dust guard for car axle boxes, consisting of two parts, one adapted to slide in the slideways of the other, each part being covered on both sides with an oil proof yielding covering of woven or felted material, and springs wholly inclosed within the packer for holding the two slideway parts together, substantially as described.

3. A dust guard for car axle boxes, consisting of two parts one adapted to slide in the slideways of the other, and each provided with a series of projecting pins extending out from each side and a covering of oil proof woven or felted material, secured thereto by said pointed pieces as set forth, the two parts having circular openings between them adapted to embrace a car axle, and a means for drawing the two parts together, substantially as described.

4. A dust guard for car axle boxes, consisting of two parts, one adapted to slide in the slideways of the other, each part being formed so as to leave a circular opening between them adapted to embrace a car axle, a covering of woven or felted material boiled in coal tar secured to both sides of each part and rigidly fastened thereto by the bent portions 7 and 7ª, and springs for drawing the two parts together, substantially as described.

5. A dust guard for car axle boxes, consisting of two parts, one part provided with slideways adapted to receive the other and both parts being formed so that the two together leave a circular opening between them adapted to embrace a car axle, two spiral springs connected with the slideway part and extending through its slideways and connecting with the slideway part for holding the two together, the slideway portion being provided with two longitudinal fitting strips, substantially as and for the purposes described.

WILLIAM H. WRIGHT.

Witnesses:
ARTHUR J. SANGSTER,
JENNIE M. CALDWELL.